

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P307821

Luminaire Tested: **14FCZ2-20-UNV-L82765-S-CP187-W2A-U-4500K**

Issue Date: 3/3/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

Test Information

Test Method: LM-79-08
Report Number: P307821
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-40)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 14FCZ2-20-UNV-L82765-S-CP187-W2A-U-4500K
Description: 1'X4' TROFFER LED MODULE,SMOOTH LENS, 0.187" POLYCARB SHEET
Light Source: (168) 4500K TUNABLE CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment:

<u>Sample No.</u>	<u>Condition</u>	<u>Description</u>
AS-5443-1	Good	WHITE TWIN R-EVOLVE FLOOD
AS-5443-2	Good	REFLECTOR
AS-5443-3	Good	DRIVER
AS-5443-4	Good	UPPER MODULE
AS-5443-5	Good	LENS
AS-5443-6	Good	DRIVER 2
AS-5443-7	Good	TRIM RING

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1929.0 lumens
Efficiency: N/A
Efficacy: 114.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.27 / 1.36
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

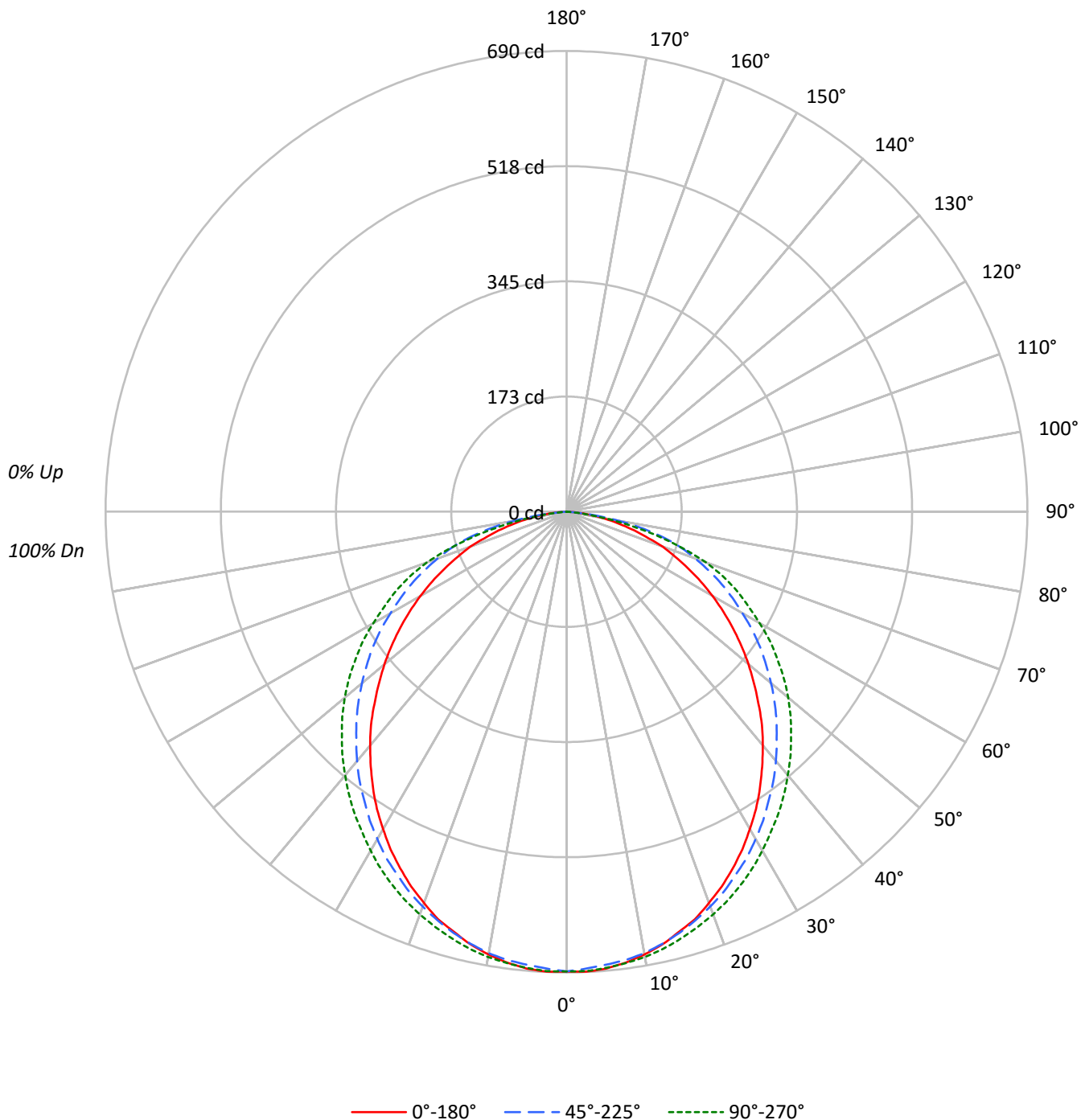
Input Watts (W): 16.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				0
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		0
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		100
1	109	104	100	96	106	102	98	94	97	94	91		94	91	89		84
2	99	90	84	78	96	89	82	77	85	80	75		82	77	73		70
3	90	79	71	65	87	78	70	64	75	68	63		72	66	62		58
4	82	70	61	55	80	69	61	54	66	59	53		64	58	53		50
5	76	63	54	47	74	62	53	47	59	52	46		57	51	46		43
6	70	56	47	41	68	55	47	41	54	46	40		52	45	40		38
7	65	51	42	36	63	50	42	36	49	41	36		47	41	35		33
8	60	47	38	32	59	46	38	32	45	37	32		43	37	32		30
9	56	43	35	29	55	42	34	29	41	34	29		40	33	29		27
10	53	40	32	26	52	39	31	26	38	31	26		37	31	26		24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1853	1853	1853
5°	1855	1840	1853
10°	1840	1835	1850
15°	1814	1820	1844
20°	1786	1802	1838
25°	1749	1781	1832
30°	1706	1759	1822
35°	1659	1734	1816
40°	1606	1714	1811
45°	1547	1692	1809
50°	1490	1674	1814
55°	1427	1660	1808
60°	1359	1637	1796
65°	1279	1632	1796
70°	1204	1618	1746
75°	1044	1581	1492
80°	845	1275	993
85°	562	442	296



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.0	3.4
10°-20°	185.0	9.6
20°-30°	277.6	14.4
30°-40°	331.1	17.2
40°-50°	342.3	17.7
50°-60°	312.5	16.2
60°-70°	245.9	12.7
70°-80°	143.2	7.4
80°-90°	26.4	1.4
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	527.6	27.4
0°-40°	858.7	44.5
0°-60°	1513.5	78.5
0°-90°	1929.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1929.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	689	689	689	689	689	
5°	687	685	681	687	686	65
15°	651	652	653	662	662	184
25°	589	592	600	614	617	271
35°	505	512	528	548	553	316
45°	406	420	445	470	475	314
55°	304	320	354	380	385	272
65°	201	222	256	276	282	199
75°	100	124	152	149	144	107
85°	18	26	14	12	10	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	688.6	688.6	688.6	688.6	688.6
2.5°	689.6	687.7	684.8	689.6	688.6
5°	686.7	684.8	681.0	686.7	685.8
7.5°	681.0	679.1	677.1	682.9	681.9
10°	673.3	672.4	671.4	678.1	677.1
12.5°	663.8	663.8	662.8	670.4	670.4
15°	651.3	652.3	653.2	661.8	661.8
17.5°	639.8	638.9	641.8	651.3	652.3
20°	623.6	625.5	629.3	640.8	641.8
22.5°	607.3	609.2	615.9	627.4	630.3
25°	589.2	592.0	599.7	614.0	616.9
27.5°	570.0	573.9	584.4	599.7	602.5
30°	549.0	554.7	566.2	583.4	586.3
32.5°	527.9	533.7	548.0	565.2	569.1
35°	505.0	511.7	527.9	548.0	552.8
37.5°	481.1	489.7	508.8	528.9	534.6
40°	457.2	466.7	487.8	508.8	515.5
42.5°	433.3	442.8	465.8	489.7	496.4
45°	406.5	419.9	444.7	469.6	475.3
47.5°	380.7	395.0	422.7	447.6	455.3
50°	355.8	370.1	399.8	425.6	433.3
52.5°	330.0	345.3	376.8	403.6	410.3
55°	304.1	320.4	353.9	379.7	385.4
57.5°	278.3	295.5	330.0	354.8	361.5
60°	252.5	270.7	304.1	329.0	333.8
62.5°	226.7	245.8	280.2	302.2	307.0
65°	200.8	221.9	256.3	276.4	282.1
67.5°	176.0	197.0	230.5	249.6	254.4
70°	153.0	172.2	205.6	220.0	221.9
72.5°	124.3	148.2	180.8	188.4	183.6
75°	100.4	124.3	152.1	149.2	143.5
77.5°	76.5	100.4	118.6	109.0	101.4
80°	54.5	78.4	82.3	67.9	64.1
82.5°	35.4	54.5	45.9	35.4	28.7
85°	18.2	25.8	14.3	11.5	9.6
87.5°	5.7	3.8	1.9	1.9	1.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)